FACT SHEET FOR NPDES PERMIT WA-004552-7

Stimson Lumber Company – Arden Operation
634 Highway 395 South
Colville, WA 99114

SUMMARY

Ecology issued a NPDES permit to Stimson Lumber Company on June 12, 2000. In the permit, there was a compliance schedule in place requiring Stimson Lumber to explore zero-discharge options of their process water. Over past several years, especially last year after the NPDES permit was issued, the company made efforts and achieved compliance of the permit condition one year ahead of schedule.

In May 14, 2001, Stimson Lumber Company requested to terminate their NPDES permit # WA-4552-7 through a letter of request. A copy of the letter is attached with this fact sheet as Reference #1. Based on an April 2001 inspection report at the facility, and after meeting with Stimson representatives, the company consultants in May, Ecology Eastern regional office made a decision/recommendation to consolidate Stimson current NPDES permit and the general stormwater permit #SO3000194 into one, instead of simply terminating the NPDES permit. Ecology response letter dated June 5, 2001 is attached with this fact sheet as Reference #2.

Other correspondence and related additional submittals under this action are documented in the permit file. By the end of August, 2001, Ecology received all required reports. Additionally, Ecology central regional office was consulted regarding similar situations. This fact sheet for the consolidated permit was based mainly on the original fact sheet written in June of 2000. Fact sheet revisions were made after the facility made structure changes to the process water and storm water system in the summer of 2000.

This new consolidated Individual Industrial Stormwater NPDES permit will keep the original permit number as WA-004552-7. As stated in the fact sheet, the current general stormwater permit # SO3000194 will be cancelled after this new permit is issued.

An application for the Individual Industrial Stormwater Permit was supposed to be submitted to Ecology to complete the application process. However, due to the timing of issuing this permit and the fact that all monitoring information is available in the DMR file, a compliance schedule is set instead in the permit, for the company to complete and submit the application.

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the State of Washington on the basis of Chapter 90.48 RCW which defines the Department of Ecology's authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the Public Notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant	Stimson Lumber company
Facility Name and Address	Stimson Lumber Company-Arden Operations 634 Highway 395 South Colville, WA 99114
Type of Facility:	Sawmill & Planing Mill with Log Storage and Handling
SIC Code	2421 and 2411
Discharge Location	Colville River Latitude: 48° 27' 16" N Longitude: 117° 52' 59" W.
Water Body ID Number	WA-59-1010

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

The Stimson Lumber Company-Arden Operations is located at Arden south of Colville Washington, 70 miles north of Spokane on state highway 395. The facility occupies a rectangular site of approximately 145 acres upstream of the Colville and Little Pend Oreille Rivers, near the community of Arden. Figure 1 illustrates the site vicinity map. The facility is served by rail via two spurs for transport of both raw logs and finished lumber. The site was first developed as a sawmill in the early 1940's. Stimson Lumber Company purchased the facility from Plum Creek Lumber in 1995.

INDUSTRIAL PROCESS

The Stimson facility now operates a modern sawmill for the production of dimension lumber. The production sequences include: log debarking, rough cutting, sorting, planing, drying and packaging. Stimson's primary product is 1"x 3"-12"x 16' board lumber. The related support activities including log storage, lumber storage, hog fuel-fired boiler, hog fuel stockpile, wood waste disposal, maintenance shops, and offices. Wood chips resulting from log processing are sold for off-site reuse; surplus bark, shavings and sawdust are sold for use as hog fuel or retained for use in Stimson's boiler or disposed on site.

Log handling and storage areas occupy approximately 50 acres along the south and east boundaries. Lumber handling and storage are restricted to areas adjacent to the buildings; the surrounding acreage is used to house support facilities or remains undeveloped. The facility layout (Figure 2) incorporates an environmental buffer strip from 200 to 500 feet wide between the actual mill operation and the river edges. This strip has been retained in more or less a natural state consisting of thick grass cover augmented by trees and woody shrubs in some portions.

WASTEWATER PROCESSES

In the Stimson Lumber operation, most of the water use is to generate steam in order to dry the lumber after cutting process. The sources of wastewater include: boiler blowdown, boiler feed softener backwash and regenerate, dehumidifier kiln condensate discharge and compressor condensate. All of these process waters are generated on batch bases. During the period since the NPDES Permit Application was submitted in March 1998, Stimson has undertaken initiatives to reduce cooling process water, and eliminated non-contact cooling water.

The table below lists the weekly average flows as of year 2000.

Table 1 Process Wastewater

Sources of wastewater	Volume flow (gallons per day)
Boiler Blowdown	7200 gpd
Boiler Softener Backwash /Regenerate	2,700 gpd
Dehumidifier Kiln Condensate	2,700 gpd
Compressor	40 gpd
Non-contact Cooling Water	0 gpd
Vehicle & Equipment Washdown	20 gpd
Total	12,660 gpd

The treatment system consists a series of retention ponds and collection system. The water stored in the ponds will be pumped to spray on logs during warm weather months from May to November. The purpose of spraying on logs is to maintain a certain moisture level during storage of the logs. The following is the description of each treatment unit and how the facility operates the system.

Process Wastewater Management System In Figure 3, all the process waters are first mixed in a 1,250 gallon batch tank (mixing treatment tank) for neutralization. Mixing of these waste streams lowers the temperature of the process water which tends to be alkaline and warm. The treated process water then flows into the primary process water pond, then into the fire-water pond as needed. Water from the primary process water pond can also be pumped into the log water pond or to the secondary process water pond for storage.

Another waste stream is from vehicle and equipment washdown area. This is a self-contained unit. The pressure washdowns are collected through a sloped floor drain system, then the water goes to a underground 1500-gallon collection basin. The average washdown flow is 100 gallons per week. The settled sludge at the bottom is pumped out twice a year and hauled away. The upper level liquid is pumped through a oil/water separator and bag filter. The treated/returned water is then collected in two 60-gallon tanks. When the tanks are full, the water is used as process water.

Stormwater/Run off Collection System Stormwater is collected in a system of ditches and culverts, and routed to the stormwater retention ponds prior to surface water discharge or directed to the log-water pond for use in a closed-loop system. During May 1 to October 31, stormwater is pumped from the reclaim ditch to the log-water pond, where it is used to spray the logs in the log yard to reduce bluing and cracking during summer storage.

Retention Pond System The pond system consists of a total of 6 ponds to provide storage, sedimentation, and thermal treatment, flow equalization and water re-use. The discharge only

occurs during the months of November to April when the water is not being used, and low evaporation rate during winter months. Below is a list of these ponds and their functions (see Figure 3).

- Fire-water pond: temporary holding for some treated process waters, used in part for fire control and dust suppression.
- Primary process water pond: primary consolidation of treated process waters.
- Secondary process water pond: additional holding pond for treated process waters.
- Log-water pond: holding for water used in closed-loop log spray system during summer months (May 1 to October 31).
- Stormwater retention ponds (2-cell): provide primary sediment removal through residence time and some detention, and equalize flow prior to discharge.

Log Yard Spray A stormwater collection system is in place around the log yard according to the 1998 Stormwater Pollution Prevention Plan. All the spray runoff and stormwater runoff can be collected through the collection ditch, then gravity flows to the stormwater ponds. During summer months (April to October), the runoff collected from log yard spraying is defined as process water, this water can not be discharged directly to any surface water without proper treatment. Stimson company has achieved that by pumping the water from the ponds, and sprays the water on logs. There is no surface water discharge during this period of time, and the water circulates in a closed loop system. During hot summer months, the pond water is not enough for spraying operation, so the river water is pumped for makeup water based on the need.

During winter months (November to April), there is no spray operation, the runoff from log yard can be classified as stormwater, and the runoff collected in the ponds can be discharged as stormwater.

Modification and Permit Consolidation

Following the issuance of the NPDES permit in June, 2000, Stimson Company began efforts to comply with the permit condition of eliminating process wastewater discharge to a surface water body. The company has accomplished the following:

- One of the three stormwater ponds was converted to a secondary process water pond to increase process water storage capacity.
- The culvert connecting the second process water pond to the stormwater pond has been removed, therefore eliminating any possible discharges of process water.
- The runoff from log yard spraying and dust suppression is collected and recycled in a closed loop system for reuse.

Details of system modification work was documented in a letter of report submitted by Stimson's consulting engineers, Roy F.Weston, and is attached in the permit file. The updated facility layout and wastewater system schematic are attached as Figure 2 and Figure 3.

A permit consolidation was recommended after the company requested cancellation of their NPDES permit WA-004552-7. Ecology recommended that consolidation of the above said NPDES permit and the stormwater baseline permit #SO3000194 into an Individual Industrial Stormwater Permit would be a more appropriate cause of action at this time.

Discharge Outfall:

During the winter season From November to April, the process water and stormwaters in the ponds are not being used for spraying. The water level in the ponds will rise and the water eventually needs to be discharge. There are two 36-inch diameter discharge culverts in the stormwater pond (Figure 2). The water is discharged to a diffusion berm, then flows into the Colville River. There is about a quarter mile from the point of discharge to the river.

PERMIT STATUS

The existing permit WA-004552-7 was issued on June 12, 2000. The letter of request from Stimson Company to terminate NPDES permit was received on May 14, 2001. Ecology's response, or the decision to consolidate Stimson's two permits was sent to the company on June 5, 2001. Pending issuance of this permit, an EPA form 3510-2F for individual industrial stormwater permit application should be submitted to the Department two months after the permit is issued.

PROPOSED PERMIT LIMITATIONS

Effluent limitations in NPDES permits will be either technology-based or water quality-based. Technology-based limitations are based upon the capability of minimum expected treatment methods to treat specific pollutants. The limits are set by regulation for certain categorical industries and otherwise are developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). If technology-based limits on any pollutant or parameter will not ensure that the discharge would not cause or contribute to water quality violations in the particular receiving water, effluent limits on that parameter must be based on reliably meeting these surface water quality standards.

The effluent constituents as characterized in the application were evaluated for appropriate technology and water quality-based limits. The limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Categorical technology-based limits have been developed for process wastewater from the timber products manufacturing industry. For the subcategories, which apply to the applicant facility (sawmill), the limits are "no discharge of process wastewater pollutants".

There are no prescribed limits for other, non-process wastewater (waters are not in contact with the raw materials, products, by-products or wastes, for example boiler blow down or cooling water discharge) generated at this facility. The technology-based limitations or minimum level of treatment required of this non-process wastewater is therefore left to the professional engineering judgement of the permit writer.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE AND HUMAN HEALTH

"Numerical" water quality criteria are numerical values set forth in the State of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC) and the National Toxics Rule (40 CFR 131.36). They specify the maximum or minimum allowable levels of certain parameters in a water body to maintain its characteristic or designated uses. Numeric criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit if technology-based limits would potentially cause or contribute to violations of the criteria.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the State of Washington.

ANTIDEGRADATION

The State of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges directly to a wetland area, which is about half mile distance from the Colville River. Colville River is designated as a Class A receiving water in the vicinity of the outfall. A Class A water is defined as: water supply (domestic, industrial, agricultural); stock watering; fish migration; fish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall meet or exceed the requirements for all or substantially all uses.

CONSIDERATION OF EFFLUENT LIMITS BASED ON SURFACE WATER QUALITY CRITERIA

Process Wastewater: There is no permitted discharge of process wastewater pollutants, based on EPA's effluent limit guidelines. All process water is currently captured and stored in a closed-loop, pond system for detention and reuse. During the months from April to October, the stored water is used for log yard spray operation and yard dust control. Runoff from these activities is collected to the reclaim ditch for reuse.

Non-process Wastewater: There is limited vehicle & equipment washdown generated on site, approximately 20 gallon per day. A new tank was installed to capture this washdown. This water which previously flowed to the reclaim ditch, is now reused for dust control. Therefore, this non-process wastewater is not permitted to the storm water pond. During periods of significant precipitation when this water is not needed for dust control, the non-process wastewater from vehicle and equipment wash down is permitted to the process water pond.

Storm Water Associated Industrial Activity: The culvert connecting the process water pond to the stormwater pond has been removed to comply with the NPDES permit requirement. The process water has not commingled with stormwater during the operation of this permit. The process water pond system combining with the seasonal log yard spray application provides adequate detention capacity to handle all process waters from Stimson operation.

The table below provides more detailed process water and stormwater discharge operations. Although the process water and stormwater was not commingled in the past two years of operation. The two systems share the same collection ditch system. There is potential the residual from process water flow will migrate to the stormwater system through collection ditch. The current baseline stormwater permit has no mechanism in place to monitor the discharge or the receiving water quality impact. Therefore, the proposed permit incorporates the existing stormwater permit with the NPDES permit, and specifies monitoring of pollutants of concern: pH, TSS, BOD_5 and turbidity.

This incorporation of stormwater discharges into the individual NPDES permit is also consistent with EPA's program to consolidate permits. Coverage under the general permit would be automatically terminated when the new individual permit takes effect.

Table 3. Process Water Generated and Stormwater Discharges

Discharge Month	Process Water Generated, Monthly average (gpd)	Stormwater Discharge Monthly average (gpd)	Discharge from Process water to Stormwater Pond
09/01	5,549	0	0
08/01	7,461	0	0
07/01	4,854	0	0
06/01	8,305	0	0
05/01	9,957	0	0
04/01	6,357	2,842	0
03/01	2,790	17,303	0
02/01	2,736	5,716	0
01/01	2,884	0	0
12/00	3,443	0	0
11/00	17,978	0	0
10/00	10,586	0	0
09/00	9,829	0	0
08/00	12,775	0	0
07/00	2,400	0	0

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring parameters are selected based on: 1) Pollutants tested during current NPDES permit operation. 2) Pollutants that have reasonable potential to impact the receiving water quality criteria.

The monitoring location is determined at the discharge point of stormwater pond.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past monitoring records, significance of pollutants, and cost of monitoring. The Table below gives the proposed monitoring schedule.

Table 4 Monitoring Schedule at the Stormwater Pond

Parameter	Sample Point	Sampling Frequency	Sample Type
Effluent flow (gpd)	Discharge point of stormwater pond	weekly	Measurement
pH (s.u.)		Monthly, November - April	grab
Turbidity			grab
TSS (mg/l)			grab
BOD (mg/l)			grab
Total Phosphorus			grab
Priority Pollutants		1/permit cycle	8 hr. composite

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210). Stormwater Pollution Prevention Plan documenting all latest modifications to you system.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control its production in order to maintain compliance with its permit. Condition G10 prohibits the reintroduction of removed substances back into the effluent. Condition G11 states that the Department will modify or revoke and reissue the permit to conform to more stringent toxic effluent standards or prohibitions. Condition G12 incorporates by reference all other requirements of 40 CFR 122.41 and 122.42. Condition G13 notifies the

Permittee that additional monitoring requirements may be established by the Department. Condition G14 requires the payment of permit fees. Condition G15 describes the penalties for violating permit conditions.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the State of Washington. The Department proposes that this proposed permit be issued for 5 years.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Roy F. Weston, Inc.

1998 Stormwater Pollution Prevention Plan Stimson Lumber Company, Arden Washington.

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

The original public notice of application was published on March 18, 1998 in Colville Statesman Examiner to inform the public that an application had been submitted and to invite comment on the issuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on December 26, 2001 in Colville Statesman Examiner to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Eastern Regional Office
4601 N Monroe Street, Suite 202
Spokane, WA 99205-1295

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (509) 456-3073, or by writing to the address listed above.

This permit and fact sheet was written by Ying Fu.

APPENDIX B--GLOSSARY

AKART-- An acronym for “all known, available, and reasonable methods of treatment”.

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Average Monthly Discharge Limitation --The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the State of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both State and Federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Responsible Corporate Officer-- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.